

REMARKS

Status of the Claims

Claims 31, 33, 36, 37, and 42-58 are pending in the application. In this Response, claims 31, 33, 36, 37, 42, 44, 46, and 47 have been amended for clarity and claims 32, 34, 35, and 38-41 have been cancelled.

Exemplary support for the amendments can be found throughout the claims and specification as filed. See, for example, cancelled claims 32, 34, 35, and 38-41, and page 6 lines 30-37 of the specification.

Applicants respectfully request the Examiner to reconsider and withdraw the outstanding rejections in view of the foregoing amendments and the following remarks.

Rejections under 35 U.S.C. § 112

Claims 36, 44 and 46 have been rejected under 35 U.S.C. § 112, second paragraph, as allegedly indefinite. The rejection is respectfully traversed.

In particular, claim 36 has been rejected because the term "size" is allegedly indefinite. Without conceding the propriety of the rejection, "size" has been replaced with "diameter" in claim 36. For support, please see, for example, page 6 lines 30-37 of the specification. In view of the amendment to claim 36, it is respectfully submitted that the rejection should be withdrawn.

Claim 44 has been rejected because the relative term "highly" has allegedly not been defined in the claim or specification. Applicants respectfully submit that the term "highly dispersible silica" has not only been clearly defined in the specification, but is also well known in the art. It should be noted that the specification defines "highly dispersible silica" as silicas described in EP 520862, WO 95/09127 or WO 95/09128 that facilitate its dispersion in the polymer and have a positive effect on the mechanical properties of the material obtained and the "highly dispersible silica" may be, for example, a silica which is sold under the trade names Z1165 MP or Z1115 MP by Rhodia. See, for example, page 10, lines 17-24 of the specification. Moreover, Applicants respectfully submit that a search of "highly dispersible silica" on the U.S. Patent and Trademark Office website yielded 79 patents including U.S. Patent Nos. 7,312,264 and 7,311,128. Accordingly, it is respectfully submitted that the term "highly dispersible silica" has not only been clearly defined in the

specification, but is also well known in the art. In view of at least the foregoing, it is respectfully submitted that the rejection should be withdrawn.

Claim 46 has been rejected for a missing "or". As suggested by the Examiner and without conceding the propriety of the rejection, Applicants have amended claim 46 to replace the second comma in line 2 with an "or". In view of the amendment to claim 46, it is respectfully submitted that the rejection should be withdrawn.

Rejection under 35 U.S.C. § 102

Claims 31-58 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Number 4,233,199 ("Abolins"). The rejection is respectfully traversed.

Initially, it should be noted that according to M.P.E.P. § 2131, "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Abolins discloses a blended thermoplastic resin compositions comprising: (a) a polyphenylene ether resin; (b) a styrene type resin; (c) a liquid or low melting organophosphorus compound; and (d) a finely particulate solid filler having a relatively high absorption capacity for organic liquids. (Col. 2, lines 34-43). Abolins further discloses that the solid filler includes diatomaceous silicas, porous zeolites and related silicate materials (e.g., open lattice clays and volcanic residues), fumed oxides of metals or metalloids, wet process or precipitated oxides, and porous or expanded rigid organic fillers. (Cols. 4-5). Abolins also discloses a liquid or low melting organophosphorus compound compounded with a particulate solid filler having a high absorption capacity for organic liquids. (See, Col. 2, lines 50-58 and Col. 3, lines 43-46).

In contrast, amended independent claim 31 recites a flame-retardant composition comprising a flame retardant organophosphorus compound impregnated on a porous solid support presenting an hydrophilic or hydrophobic surface, wherein *the inorganic oxide is an amorphous, synthetic, and precipitated silica having a total pore volume of at least 0.5 ml/g and being in powder form composed of porous granules or agglomerates or beads having a mean diameter (D50) of greater than or equal to 60 μ m*, the organophosphorus compound having a hydrophilic or hydrophobic nature similar to said surface of the porous compound.

Abolins merely discloses a wide variety of potential solid fillers having a high absorption capacity for organic liquids which include diatomaceous silicas, porous zeolites and related silicate materials (e.g., open lattice clays and volcanic residues), fumed oxides of metals or metalloids, wet process or precipitated oxides, and porous or expanded rigid organic fillers. Applicants respectfully submit that Abolins does not disclose or suggest *an amorphous, synthetic, and precipitated silica having a total pore volume of at least 0.5 ml/g and being in powder form composed of porous granules or agglomerates or beads having a mean diameter (D50) of greater than or equal to 60 μ m*, as presently recited.

Applicants further respectfully submit that the fillers disclosed by Abolins are not inherently equivalent to the presently recited *amorphous, synthetic, and precipitated silica having a total pore volume of at least 0.5 ml/g and being in powder form composed of porous granules or agglomerates or beads having a mean diameter (D50) of greater than or equal to 60 μ m*. According to M.P.E.P. § 2112, the fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993); *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill (emphasis added). *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). Inherency, however, may not be established by probabilities or possibilities. *Id.* The mere fact that a certain thing may result from a given set of circumstances is not sufficient. *Id.*

The Office Action has provided no reasoning or technical evidence that supports the assertion that Abolins' fillers are inherently the same as the presently recited *amorphous, synthetic, and precipitated silica having a total pore volume of at least 0.5 ml/g and being in powder form composed of porous granules or agglomerates or beads having a mean diameter (D50) of greater than or equal to 60 μ m*.

It should be noted that in relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original).

Applicants respectfully submit that the Office Action does not set forth any reasoning or technical evidence to support the contention that the fillers of Abolins are inherently the same as the presently recited *amorphous, synthetic, and precipitated silica having a total pore volume of at least 0.5 ml/g and being in powder form composed of porous granules or agglomerates or beads having a mean diameter (D50) of greater than or equal to 60 μ m*.

Moreover, Applicants respectfully submit that Abolins discloses a liquid or low melting organophosphorus compound compounded with a particulate solid filler having a high absorption capacity for organic liquids. (See, Col. 2, lines 50-58 and Col. 3, lines 43-46). In contrast, amended independent claim 31 recites *an amorphous, synthetic, and precipitated silica having a total pore volume of at least 0.5 ml/g and being in powder form composed of porous granules or agglomerates or beads having a mean diameter (D50) of greater than or equal to 60 μ m*.

Accordingly, Applicants respectfully submit that Abolins fails to disclose or suggest a flame-retardant composition comprising a flame retardant organophosphorus compound impregnated on a porous solid support presenting an hydrophilic or hydrophobic surface, wherein *the inorganic oxide is an amorphous, synthetic, and precipitated silica having a total pore volume of at least 0.5 ml/g and being in powder form composed of porous granules or agglomerates or beads having a mean diameter (D50) of greater than or equal to 60 μ m*, the organophosphorus compound having a hydrophilic or hydrophobic nature similar to said surface of the porous compound, as presently recited in amended independent claim 31.

As such, in view of at least the foregoing, it is respectfully submitted that the rejection over Abolins should be withdrawn.

Conclusion

In view of at least the foregoing amendments and remarks, reconsideration of the claims and allowance of the subject application is earnestly solicited.

In the event that there are any questions relating to this application, it would be appreciated if the Examiner would telephone the undersigned attorney concerning such questions so that prosecution of this application may be expedited.

Respectfully submitted,

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